

CLAIMS

1. A method of operating a bridge device between first and second networks, there being a plurality of first network devices (202) in the first network, a plurality of second network devices (204) in the second network, one of the network devices being a bridge device (206) in both the first and second networks, wherein the first network uses message signals (230) including device descriptions of the network devices as being of one of a number of device types including a composite device type having a plurality of subdevices and wherein devices in the first network find further information regarding composite devices by sending further device queries relating to an individual subdevice and receiving from the composite device information relating to the individual subdevice; the method including:
- receiving a device description query in the bridge device (206) from the first network (210);
- responding to the device description query with a device description message (230) including the description of the bridge device as being of a composite device type and a value representing the number of other devices in the second network;
- receiving at least one further device description query from a device (202) in the first network (210) relating to one of the other devices (204);
- responding to the or each further device description query with a device description message including a description of the other device (204); and
- forwarding in the first network (210) further messages to or from devices (204) in the second network from or to devices (202) in the first network respectively as messages to or from the respective subdevice of the bridge device, so that network devices (204) in the second network appear to network devices (202) in the first network as sub-devices of the bridge device (206) of composite device type.
2. A method according to claim 1 wherein the number of devices in the second network changes and the value representing the number of

devices in the second network represents the instantaneous value of devices in the second network.

3. A method according to claim 1 or 2, further including:

5 receiving a device description query in the bridge device (206) from the second network;

responding to the device description query with a device description message (230) including the description of the bridge device as being of a composite device type and a value representing the number of other devices
10 (202) in the first network;

receiving at least one further device description query from a device (204) in the second network relating to one of the other devices (202);

responding to the or each further device description query with a device description message including a description of the other device (202); and

15 forwarding in the second network further messages to or from devices (202) in the first network from or to devices (204) in the second network respectively as messages to or from the respective subdevice of the bridge device;

whereby network devices (202) in the first network appear to network
20 devices (204) in the second network as sub-devices of the bridge device (206) of composite device type.

4. A bridge device between first and second networks, there being a plurality of first network devices (202) in the first network, a plurality of
25 second network devices (204) in the second network, wherein the first network uses message signals (230) including device descriptions of the network devices as being of one of a number of device types including a composite device type having a plurality of subdevices and wherein devices in the first network find further information regarding composite devices by sending
30 further device queries relating to an individual subdevice and receiving from the composite device information relating to the individual subdevice; the bridge device comprising:

a transceiver (224) for communicating with other devices in the first network;

a transceiver (226) for communicating with other devices in the second network;

5 and a message handler (182) arranged:

to receive a device description query in the bridge device from the first network and to respond to the device description query with a device description message (230) including the description of the bridge device as being of a composite device type and a value representing the number of other
10 devices in the second network;

to receive at least one further device description query from the first network relating to one of the other devices (204); and to respond to the or each further device description query with a device description message including a description of the other device (204) as a corresponding sub-
15 device; and

to forward in the first network (210) further messages to or from devices (204) in the second network from or to devices (202) in the first network respectively as messages to or from the respective subdevice of the bridge device;

20 whereby network devices in the second network appear to network devices in the first network as sub-devices of the bridge device (206) of composite device type.

5. A bridge device according to claim 4 wherein the number of
25 devices in the second network is not constant and the bridge is arranged to respond to a device description query from the first network with the instantaneous number of devices in the second network.

6. A bridge device according to claim 4 or 5 wherein the message
30 handler (182) is arranged:

to receive a device description query in the bridge device from the second network and to respond to the device description query with a device

description message (230) including the description of the bridge device as being of a composite device type and a value representing the number of other devices (202) in the first network;

to receive at least one further device description query from the second
5 network relating to one of the other devices (202); and to respond to the or each further device description query with a device description message including a description of the other device (202) as a corresponding sub-device; and

to forward in the second network (210) further messages to or from
10 devices (202) in the first network from or to devices (204) in the second network respectively as messages to or from the respective subdevice of the bridge device;

whereby network devices in the second network appear to network
devices in the second network as sub-devices of the bridge device (206) of
15 composite device type.

7. A system comprising:

a first network including a plurality of first network devices (202),
wherein the first network uses message signals (230) including device
20 descriptions of the network devices as being of one of a number of device types including a composite device type having a plurality of subdevices and wherein devices in the first network find further information regarding composite devices by sending further device queries relating to an individual subdevice and receiving from the composite device information relating to the
25 individual subdevice;

a second network including a plurality of second network devices (204);

wherein one of the network devices is a bridge device (206) in both the first and second networks; the bridge device comprising:

a first transceiver (224) for communicating with other devices in the first
30 network;

a second transceiver (226) for communicating with other devices in the second network;

and a message handler (182) arranged:

to receive a device description query in the bridge device from the first network and to respond to the device description query with a device description message (230) including the description of the bridge device as
5 being of a composite device type and a value representing the number of other devices in the second network;

to receive at least one further device description query from the first network relating to one of the other devices (204); and to respond to the or each further device description query with a device description message
10 including a description of the other device (204) as a corresponding sub-device; and

to forward in the first network (210) further messages to or from devices (204) in the second network from or to devices (202) in the first network respectively as messages to or from the respective subdevice of the bridge
15 device;

whereby network devices in the second network appear to network devices in the first network as sub-devices of the bridge device (206) of composite device type.

20 8. A system according to claim 7 wherein the number of devices in the second network is not constant and the bridge device (206) is arranged to respond to a device description query from the first network with the instantaneous number of devices in the second network.

25 9. A system according to claim 7 or 8 wherein the second network uses message signals (230) including device descriptions of the network devices as being of one of a number of device types including a composite device type having a plurality of subdevices and devices in the second network find further information regarding composite devices by sending further device
30 queries relating to an individual subdevice and receiving from the composite device information relating to the individual subdevice;

wherein the message handler (182) is arranged:

to receive a device description query in the bridge device from the second network and to respond to the device description query with a device description message (230) including the description of the bridge device as being of a composite device type and a value representing the number of other
5 devices (202) in the first network;

to receive at least one further device description query from the second network relating to one of the other devices (202); and to respond to the or each further device description query with a device description message including a description of the other device (202) as a corresponding sub-
10 device; and

to forward in the second network (210) further messages to or from devices (202) in the first network from or to devices (204) in the second network respectively as messages to or from the respective subdevice of the bridge device;

15 whereby network devices in the second network appear to network devices in the second network as sub-devices of the bridge device (206) of composite device type.

10. A computer program arranged to control a networked bridge
20 device to carry out the method of claim 1, 2 or 3.

11. A computer program according to claim 10 recorded on a data carrier.